UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,033	12/28/2001	Jin Yang	PA2090US	2586

22830	7590	11/30/2005

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EXAMINER
MCLEAN MAYO, KIMBERLY N

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 11/30/2005 .

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 September 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The enclosed detailed action is in response to the Amendment submitted on September

16, 2005.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chinchar et

al. (USPN: 6,675,178) in view of Tse (USPN: 6,895,471).

Regarding claims 1, 10, 19, 25, 28-30 and 36-38, Chinchar discloses a data cache located in

memory of the system (comprised of the logic elements in Figure 1, which performs the scan and

update operations; the logic elements forming the data cache comprises hardware, which

includes physical memory and software which is stored in memory and thus the data cache is

located in memory of the system) coupled to a first set of data stored in a database (data stored in

Figure 1, Reference 10) and a second set of data stored in memory of the system (data stored in

Figure 1, Reference 30), wherein the data cache is configured to perform a scan operation on at

least of portion of the first set of data and an update operation on the second set of data with

changes that have occurred in the first set of data (Figure 3, (all steps); Figure 5, Steps 10-38); an

engine manager coupled to the data cache and configured to instruct the data cache to perform

the scan and update operations (logic in the system which initiates the above steps in Figure 3

and Figure 5; C 8, L 46-53; C 9, L 5-8) and wherein the engine manager is configured to

determine if the first set of data [data in the first database] has changed since the last update (C 8,

L 36-39) and is configured to perform a second update on the second set of data with the changes

to the first set of data since the last update operation (whenever a change is detected, the system

repeats the steps in Figure 3 and 5; C 8, L 46-53; C 9, L 5-8) and a solver (Figure 1, References

22, 24, 26 and 28) coupled to the data cache and configured to perform computations on the

second set of data (Figure 4 (all steps); Figure 5, Step 40) and wherein the solver is configured to

re-perform the computations on the updated second set of data including changes that have

occurred on the first set of data since the last update operation (whenever a change is detected,

the system repeats the steps (Figure 4 (all steps); Figure 5, Step 40). Additionally, regarding

claim 37, all hardware systems include software (instructions on a computer readable medium) to

control the hardware elements of the system. Chinchar does not disclose the data stored in the

data cache facilitating faster computations on the data stored therein than if the data is stored in a

database or performing computations on the updated data stored in the data cache, wherein the

updated data includes the changes that have occurred in the first set of data. However, Tse

discloses storing data in a data cache wherein the data stored in the data cache facilitating faster

computations on the data stored therein than if the data is stored in a database (C 8, L 43-48, L

52-65; C 10, L 27-39) and performing computations (via the agrregator) on the updated data

stored in the data cache, wherein the updated data includes the changes that have occurred in the

first set of data (C 8, L 45-48, L 56-66; C 10, L 27-39). Tse discloses that these features provide

faster completion of data processing using less computational resources (C 8, L 54-55). In

Chinchar's system, data processing is performed on the data stored in the database storage. One

of ordinary skill in the art would have recognized that Chinchar's system could be improved by providing faster computations using Tse's cache teachings. Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Tse's teachings with the system taught by Chinchar for the desirable purpose of improved performance.

Regarding claims 2, 11 and 19, Chinchar discloses an application specific plug-in coupled to the solver to perform the computations on the second set of data (the system software used to control elements 22, 24, 26 and 28 in Figure 1).

Regarding claims 3, 12, 20 and 31, Chinchar discloses the system configured to update the second set of data with substantially no more than the changes to the first set of data (C 9, L 1-18; C 11, L 17-54).

Regarding claims 4, 13, 21, 32 and 34, Chinchar discloses the system configured to update the second set of data with changes to the first set of data in a near real-time fashion (C 11, L 55-63).

Regarding claims 5, 14, 22 and 33, Chinchar discloses the system is configured to update the second set of data with substantially no more than the changes to the first set of data that meet a given condition (C 9, L 1-18; C 11, L 17-54; condition -> data which has been changed since the last update).

Regarding claims 6, 15 and 23, Chinchar discloses the data cache coupled to a first set of data

and a second set of data in a bidirectional fashion (C 4, L 54-55; C 10, L 64-67).

Regarding claims 7, 16 and 24, Chinchar discloses the first set of data comprising metadata

(Figure 1, Reference 14, configuration data) and application data (Figure 1, Reference 12;

transactional data).

Regarding claims 8, 17 and 26, Chinchar discloses the solver comprising a generic algorithms

module (C 5, L 10-67; C 6, L 1-23).

Regarding claims 9, 18, 27 and 35, Chinchar discloses the computations solving problems

encountered in business applications (C 3, L 11-25; C 4, L 66-67; C 5, L 1-3).

Response to Arguments

4.   Applicant's arguments with respect to the claims have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Nishizawa – USPN: 6,820,085 – synchronizing databases using a cache.

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
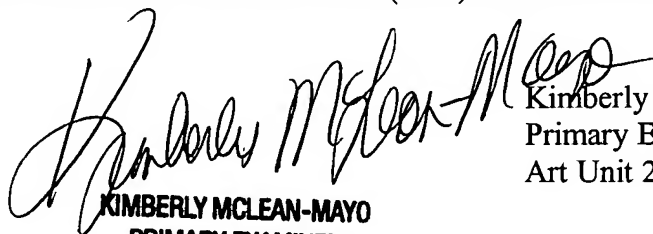
A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 571-272-

4194. The examiner can normally be reached on Mon (10-4), Tues, Thu (10-2), Fri (10-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly N. McLean-Mayo
Primary Examiner
Art Unit 2187

KIMBERLY MCLEAN-MAYO
PRIMARY EXAMINER

KNM

November 22, 2005